

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
26 February 2004 (26.02.2004)

PCT

(10) International Publication Number  
WO 2004/016607 A1

(51) International Patent Classification<sup>7</sup>: C07D 405/04,  
403/04, 471/04, A61K 31/519, 31/355, 31/4709, A61P  
7/02

(21) International Application Number:  
PCT/IB2003/004177

(22) International Filing Date: 18 August 2003 (18.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/403,639 16 August 2002 (16.08.2002) US  
60/428,283 22 November 2002 (22.11.2002) US

(71) Applicant (for all designated States except US): KIN-  
CIA PTY LTD. [AU/AU]; Suite 4, 899 Whitehorse Road,  
Box Hill Victoria 3128 (AU).

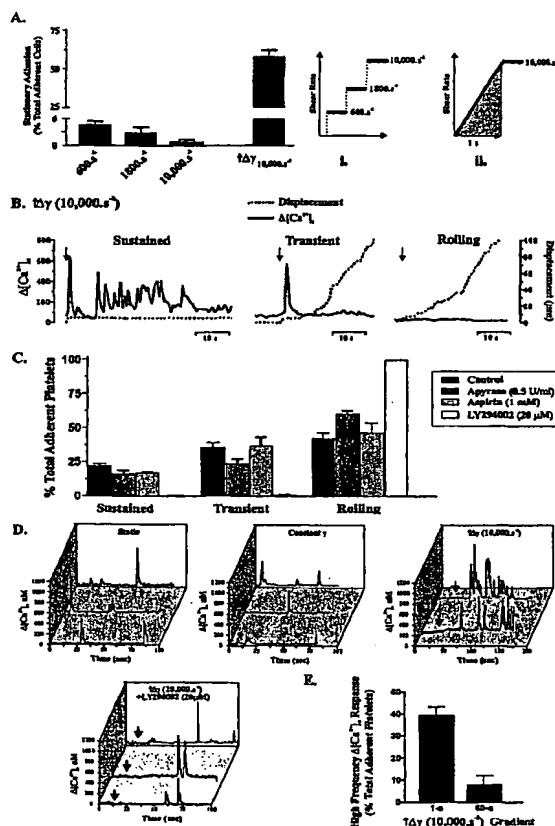
(72) Inventors; and

(75) Inventors/Applicants (for US only): JACKSON, Shaun,

P. [AU/AU]; 33 Clifton Street, North Balwyn, Victo-  
ria 3104 (AU). ROBERTSON, Alan, D. [AU/AU];  
14 Camera Street, Fairlight, New South Wales 2094  
(AU). KENCHE, Vijaya [AU/AU]; 9 Kings Close, Oak-  
leigh East, Victoria 3166 (AU). THOMPSON, Phillip  
[AU/AU]; 8 Winifred Street, Northcote, Victoria 3070  
(AU). PRABAHARAN, Hishani [AU/AU]; 35 Clanbrae  
Avenue, Burwood, Victoria 3125 (AU). ANDERSON,  
Karen [AU/AU]; 4/754 Station Street, Box Hill, Victoria  
3128 (AU). ABBOTT, Belinda [AU/AU]; 4/1 Wridgway  
Avenue, Burwood, Victoria 3125 (AU). GONCALVES,  
Isaac [AU/AU]; 45 Robert Molyneaux Avenue, Endeavour  
Hills, Victoria 3802 (AU). NESBITT, Warwick [AU/AU];  
11/15 University Street, Carlton, Victoria 3053 (AU).  
SCHOENWAEELDER, Simone [AU/AU]; 3/1 Wridgway  
Avenue, Burwood, Victoria 3125 (AU). SAYLIK, Dilek  
[AU/AU]; 8 Dunkeld Street, Meadow Heights, Victoria  
3048 (AU).

[Continued on next page]

(54) Title: INHIBITION OF PHOSPHOINOSTIDE 3-DINASE BETA



(57) **Abstract:** The present invention relates to selective inhibitors of phosphoinositide (PI) 3-kinase  $\beta$ , use of the selective inhibitors in anti-thrombotic therapy, and a method for screening compounds useful for the new anti-thrombotic therapy by detecting selective inhibitory activity of PI 3-kinase  $\beta$  of the compound. The invention also relates to novel compounds that are inhibitors of PI 3-kinase.

WO 2004/016607 A1

**WO 2004/016607 A1**

(81) **Designated States (national):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*